



Virginia
Regulatory
Town Hall

Final Regulation Agency Background Document

Agency Name:	Department of Mines, Minerals and Energy
VAC Chapter Number:	4 VAC 25-101
Regulation Title:	Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells
Action Title:	Final Regulation
Date:	May 30, 2001

Please refer to the Administrative Process Act (§ 9-6.14:9.1 *et seq.* of the *Code of Virginia*), Executive Order Twenty-Five (98), Executive Order Fifty-Eight (99), and the *Virginia Register Form, Style and Procedure Manual* for more information and other materials required to be submitted in the final regulatory action package.

Summary

Please provide a brief summary of the new regulation, amendments to an existing regulation, or the regulation being repealed. There is no need to state each provision or amendment; instead give a summary of the regulatory action. If applicable, generally describe the existing regulation. Do not restate the regulation or the purpose and intent of the regulation in the summary. Rather, alert the reader to all substantive matters or changes contained in the proposed new regulation, amendments to an existing regulation, or the regulation being repealed. Please briefly and generally summarize any substantive changes made since the proposed action was published.

This final regulation governs the drilling, equipping, operating and plugging of vertical ventilation holes in underground coal mines and the practice of mining near or through a vertical ventilation hole or gas well. Due to the extensive formatting changes, DMME is repealing the existing 4 VAC 25-100, Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells and is implementing these new 4 VAC 25-101, Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells.

Changes from the current regulation include (i) conforming the definitions with those in the Virginia Gas and Oil Regulation (4 VAC 25-150) and current industry standards; (ii) clarifying provisions that address citizens' right to object to permit applications; (iii) establishing record keeping requirements that are not overly invasive on the industry while providing the necessary

information to the department and the public about the operations; (iv) clarifying casing requirements for vertical ventilation holes, making them consistent with what is required for coalbed methane wells; (v) establishing safe mining procedures as part of mine bleeder plans when mining through vertical ventilation holes or wells; (vi) clarifying requirements for plugging vertical ventilation holes; and (vii) providing for permanent markers to be placed at the location of abandoned vertical ventilation holes.

No substantive changes have been made since the proposed regulation was published.

Statement of Final Agency Action

Please provide a statement of the final action taken by the agency: including the date the action was taken, the name of the agency taking the action, and the title of the regulation.

On May 30, 2001, the Director of the Department of Mines, Minerals and Energy adopted a final 4 VAC 25-101 regulation entitled “Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells” and repealed the 4 VAC 25-100 regulation “Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells”

Basis

Please identify the state and/or federal source of legal authority to promulgate the regulation. The discussion of this statutory authority should: 1) describe its scope and the extent to which it is mandatory or discretionary; and 2) include a brief statement relating the content of the statutory authority to the specific regulation. In addition, where applicable, please describe the extent to which proposed changes exceed federal minimum requirements. Full citations of legal authority and, if available, web site addresses for locating the text of the cited authority, shall be provided. If the final text differs from that of the proposed, please state that the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the final regulation and that it comports with applicable state and/or federal law.

The Department of Mines, Minerals and Energy has the legal authority to promulgate this regulation under Sections 45.1-161.3, 45.1-161.106, 45.1-161.121, 45.1-161.254 and 45.1-161.292 of the Code of Virginia. Sections 45.1-161.121 and 45.1-161.292 mandate the promulgation of this regulation.

Section 45.1-161.3(4) states that the Department has the authority “to promulgate regulations necessary or incidental to the performance of duties or execution of powers conferred under this title and other relevant chapters, which regulations shall be promulgated by the Department, the Chief, or the Director, as appropriate, in accordance with the provisions of Article 2 (Section 9-6.14:7.1 et seq.) of the Administrative Process Act.

Sections 45.1-161.106 and 45.1-161.254 provide the Chief with the authority to promulgate rules and regulations necessary to ensure safe and healthy working conditions in underground coal mines and in surface coal mines respectively.

Additionally, Section 45.1-161.121 (C) states that the Chief shall promulgate regulations which prescribe the procedure to be followed by mine operators in petitioning the Chief for approval to conduct such activities within 200 feet of a gas or oil well or a vertical ventilation hole.

Finally, Section 45.1-161.292(B) states that the Chief shall promulgate regulations which prescribe the procedure to be followed by mine operators in petitioning the Chief for approval to conduct such activities closer than 200 feet to a well. A petition may include a request to mine through a plugged well or plugged vertical ventilation hole. A petition may also include a request to mine through a well or vertical ventilation hole and lower the head of such well or vertical ventilation hole.”

Purpose

Please provide a statement explaining the need for the new or amended regulation. This statement must include the rationale or justification of the final regulatory action and detail the specific reasons it is essential to protect the health, safety or welfare of citizens. A statement of a general nature is not acceptable, particular rationales must be explicitly discussed. Please include a discussion of the goals of the proposal and the problems the proposal is intended to solve.

The regulation governs the drilling, equipping, operating, and plugging vertical ventilation holes that are used to remove methane gas from underground coal mines. It also governs the practice of mining near or through a vertical ventilation hole or gas well. Use of vertical ventilation holes affects the safety of underground miners through the removal of explosive methane gas from the mine atmosphere. Safety is also affected by the potential hazards associated with mining activity occurring in close proximity to the vertical ventilation holes and gas wells. Sufficient barriers must be left around the wells to ensure underground miners don't accidentally mine into the wells. The regulations are necessary to protect the welfare of citizens having interests in the vicinity of a location of a vertical ventilation hole.

The regulation streamlines the regulatory process, eliminate unnecessary regulatory requirements, clarifies language, and implements changes based on the Department of Mines, Minerals and Energy's, mine operators', coal miners', and citizens' experiences in implementing the Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells (4 VAC 25-100). These regulations were last amended in 1991.

Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. Please note that a more detailed discussion is required under the statement of the regulatory action's detail.

This new regulation is replacing the existing 4 VAC 25-100, Regulations Governing Vertical Ventilation Holes and Mining Near Gas and Oil Wells. The new regulation contains the following provisions that differ from the existing regulation:

Section 4 VAC 25-101-10 provides definitions that are consistent with those used in the Virginia Gas and Oil Regulation (4 VAC 25-150) and consistent with definitions used by the coal mining industry.

Section 4 VAC 25-101-20 clarifies provisions for citizens' right to object to permit applications.

Section 4 VAC 25-101-30 is new and requires submittal of information on coal seams to be penetrated by a proposed vertical ventilation hole.

Section 4 VAC 25-101-40 is new and requires drilling on a permitted vertical ventilation hole to be started within two years of the date the permit is issued.

Section 4 VAC 25-101-50 is new and requires mine operators to account for changes to the operation of a vertical ventilation hole or coalbed methane well in their approved bleeder plan.

Sections 4 VAC 25-101-60 and 70 remove provisions that have never been used for simultaneous applications for vertical ventilation holes and coalbed methane wells.

Section 4 VAC 25-101-80 changes a reference that was to a workable coal seam to reference a minable coal seam or inactive mine. This is consistent with definition changes.

Sections 4 VAC 25-101-90 and 4 VAC 25-101-140 clarify record keeping requirements.

Section 4 VAC 25-101-110 amends casing requirements for vertical ventilation holes.

Section 4 VAC 25-101-140 specifies what reports must be submitted to the department after a vertical ventilation hole is drilled.

Section 4 VAC 25-101-180 changes the length of time objections may be raised to a plan to mine within 200 feet of a vertical ventilation hole or gas well to be consistent with the governing section in the Coal Mine Safety Act.

Section 4 VAC 25-101-190 is new and provides that safe mining procedures must be included in an underground coal mine operator's approved bleeder plan.

Section 4 VAC 25-101-200 sets out requirements for plugging vertical ventilation holes that are consistent with the plugging provisions of the department's Gas and Oil Regulation.

Section 4 VAC 25-101-210 is new and establishes the requirement for placement of permanent markers at abandoned vertical ventilation holes.

Section 4 VAC 25-101-220 is new and requires mine operators to annually provide to DMME a status report on all permitted vertical ventilation holes.

Issues

Please provide a statement identifying the issues associated with the final regulatory action. The term “issues” means: 1) the advantages and disadvantages to the public of implementing the new provisions; 2) the advantages and disadvantages to the agency or the Commonwealth; and 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, please include a sentence to that effect.

The primary advantage to the public, both citizens and industry, as well as to the DMME is that the regulation has been reformatted for clarity, and that applicable provisions of the regulation have been re-written to be consistent with the requirements of the Virginia Gas and Oil Regulation (4 VAC 25-150). By conforming this regulation to the Virginia Gas and Oil Regulation, similar requirements will govern similar actions undertaken by the coal and natural gas industries. These changes make the regulation easier for the public to understand, promotes more efficient operation of vertical ventilation holes by streamlining the regulatory process and eliminating unnecessary requirements, and clarifies the actions DMME must take to help industry comply with the regulation. The changes will help the DMME respond more promptly and efficiently to industry and the public.

The Department does not believe the regulation will present any disadvantages to the public or the Commonwealth. The Department worked with its regulatory work committee to develop recommendations that require the least amount of information necessary to ensure industry operations maintain compliance with applicable statutes, while at the same time providing necessary information to the public about the operations.

Statement of Changes Made Since the Proposed Stage

Please highlight any changes, other than strictly editorial changes, made to the text of the proposed regulation since its publication.

The Department has made two changes to the regulation, in subsections 4 VAC 25-101-150.D and 4 VAC 25-101-160.G, since the proposed regulation was published. Both of these changes are to clarify that the provisions governing mining near or through a well only apply in instances where a well penetrates a coal seam but do not apply in instances where the well is located outside of where the coal seam outcrops to the surface.

Public Comment

Please summarize all public comment received during the public comment period and provide the agency response. If no public comment was received, please include a statement indicating that fact.

Comment: One commenter stated he would like to see the regulation amended to stop coalbed methane gas well operators from being able to close and open surface valves on gas wells to increase the well's methane content. He stated that he believes this action puts underground miners in danger.

Response: The valves that the commenter refers to are placed on coalbed methane wells to control the amount of gas being drawn out of the wells from the underground mine. These valves are controlled by the permitted gas well operator. DMME does not have the authority under the Coal Mine Safety Act over these gas well operators and cannot include the requested language in this regulation.

However, the Mine Safety Act and this regulation do address the underground safety issues raised by the operation of coalbed methane wells. Underground coal mine operators are required to follow an approved bleeder plan in accordance with section 45.1-161.220 of the Coal Mine Safety Act and section 4 VAC 25-101-50 of this regulation. Under the bleeder plan, the coal mine operator must operate the bleeder system to provide positive movement of air through or around abandoned or worked-out areas in an amount sufficient to prevent a hazardous accumulation of gas in such areas and to minimize the effect of variations in atmospheric pressure. Additional requirements in the Coal Mine Safety Act limit the allowable concentrations of methane underground. Compliance with bleeder plan and mine atmosphere requirements will protect underground miners. Based on these factors, this change is not being made.

Comment: Two commenters stated that mine operators operate vertical ventilation holes and coalbed methane wells fully open during DMME mine safety inspections. The commenters believe that if these gas wells are to be operated at 100% open when a DMME inspector is present, then 100% open settings should be required at all other times.

Response: Underground coal mine operators are required to follow an approved bleeder plan in accordance with section 45.1-161.220 of the Coal Mine Safety Act and section 4 VAC 25-101-50 of this regulation. Under the bleeder plan, the coal mine operator must operate the bleeder system to provide positive movement of air through or around abandoned or worked-out areas in an amount sufficient to prevent a hazardous accumulation of gas in such areas and to minimize the effect of variations in atmospheric pressure. The bleeder plan must address how the bleeder system will take into affect the operation of degasification systems. Additionally, persons are required to test for methane concentrations and record the results of the tests. DMME inspectors check the records of these tests as part of their mine inspections to ensure that mine ventilation meets legal requirements. These provisions are in place to ensure that the mine is properly

ventilated whether vertical ventilation holes or coalbed methane wells are fully open, fully closed, or controlled at any point in between. Therefore, the Coal Mine Safety Act and these regulations already require proper ventilation and mine atmosphere quality be maintained, and this additional requirement is not necessary.

Comment: One commenter requested that DMME conduct a test to determine the impact that coalbed methane wells have on the underground ventilation system. He proposes that the Department measure the effectiveness of the bleeder plan when all of the wells connected to sealed areas and the bleeder system are shut in.

Response: The mine bleeder plan must work to prevent a hazardous accumulation of gases under all operating conditions. Completing an artificial test such as is proposed by the commenter would not evaluate actual underground mine conditions, and therefore would not provide useful information about a bleeder plan's effectiveness.

Comment: One commenter stated that sealed areas should only be vented by relief vertical ventilation holes equipped with check valves that act as relief valves during barometric pressure drops.

Response: Subsection 45.1-161.228 A and B of the Coal Mine Safety Act require worked out areas to be sealed or ventilated and where the worked out areas are sealed the sealing that the work is to be done in accordance with sealing provisions of the approved bleeder plan. The bleeder plans (see section 45.1-161.220) include construction specifications, sequence of construction, and location of seals. Once approved and constructed, seals must be examined weekly (see section 45.1-161.210), or in the case of seals where intake air passes by, within three hours preceding the beginning of any shift (see section 45.1-161.208). During these examinations the mine foreman must examine for hazardous conditions as well as conduct tests for methane. Should levels of methane greater than that allowed by the Coal Mine Safety Act exist, corrective actions must be taken. Should a representative of DMME encounter levels of methane greater than that allowed by the Coal Mine Safety Act, it would be considered a violation and corrective action would have to be taken. These requirements and others within the Coal Mine Safety Act provide ample checks and balances on methane liberation into the mine ventilation system, therefore this additional requirement is not necessary.

Comment: One commenter requested that the definition of gob well in 4 VAC 25-101-10 be amended to read: "Gob well" means a coalbed methane gas well which is capable of producing coalbed methane gas from the distressed zone associated with any full-seam extraction of coal that extends above and below the mined-out-coal seam that is not connected to any sealed area of an underground mine.

Response: Gob wells remove gases from both sealed and unsealed areas of underground coal mines. The proposed definition change would limit the definition to only those wells removing gases from an unsealed area. This change would not accurately define a gob well, so the change is not being made.

Comment: One commenter requested that the definition of vertical ventilation hole be amended to strike the word “primarily” when describing a vertical ventilation hole’s purpose. The commenter asked that the definition read: “Vertical Ventilation Hole” means any hole drilled from the surface to the coal seam used ~~primarily~~ for the safety purpose of removing gas from the underlying coal seam and the adjacent strata, thus, removing the gas that would normally be in the mine ventilation system.

Response: Removal of the word “primarily” would expand this definition to encompass almost all holes drilled from the surface into underground coal mines, including vertical ventilation holes and coalbed methane gas wells. Vertical ventilation holes and coalbed methane gas wells are separate types of holes requiring different types of operating standards, and therefore must be separately defined. The regulation already separately defines both terms. Therefore this proposed change is not being made.

Comment: One commenter wanted 4 VAC 25-101-150.B to be amended to require that any change or adjustment to a vertical ventilation hole or coalbed methane well must be physically preformed (not done through automation) and that the change must be communicated to the effected mine prior to any changes or adjustments being made.

Response: The Coal Mine Safety Act, under section 45.1-161.220, requires the bleeder plan to address how the bleeder system will be affected by the use and operation of degasification systems. Regulation section 4 VAC 25-101-150 is consistent with this statutory requirement by requiring the mine operator to operate the bleeder system such that changes in the operation of a vertical ventilation hole or coalbed methane well will not create hazardous conditions for miners working underground. Additionally, the underground mine operator must address in his bleeder plan, how changes or adjustments to a vertical ventilation hole or coalbed methane well will be recorded. The changes proposed by the commenter would impose conditions on a gas well operator and go beyond the statutory authority provided in the Coal Mine Safety Act. Based on these factors, this change is not being made.

Detail of Changes

Please detail any changes, other than strictly editorial changes, that are being proposed. Please detail new substantive provisions, all substantive changes to existing sections, or both where appropriate. This statement should provide a section-by-section description - or crosswalk - of changes implemented by the proposed regulatory action. Include citations to the specific sections of an existing regulation being amended and explain the consequences of the changes.

4 VAC 25-101-10. Definitions. (old 4 VAC 25-100.10) -- Several definitions were added (accurate map or plat, bridge plug, coalbed methane gas, coal seam, director, form prescribed by the Chief, gas well operator, gas and oil inspector, gas well, groundwater, intermediate string, log, mfc, minable coal seam, mining, mud, pending, permitted, pipeline, state plane coordinate system, string of pipe, tubing, water protection string) to update the definitions to current

industry standards and to conform the definitions to those of the Virginia Gas and Oil Regulations (4 VAC 25-150).

4 VAC 25- 101-20. Application for permits; maps or plats; notice. (old 4 VAC 25-100.20) -- Changes to this section were for clarification purposes and formatting changes for better understanding. Specifically, the survey accuracy requirements were removed and detailed requirements for safety equipment were added. The notice of right to object requirement was changed from 15 to 10 days. This change was made to conform the requirement to the Code of Virginia.

4 VAC 25-101-30. Receipt of coal seam information; decision on casing. -- This is a new section that requires all parties to submit coal seam information to the Chief of the Division of Mines. This section also requires that the Chief must approve seams to be protected by casing.

4 VAC 25-101-40. Expiration of Permit. -- This is a new section that requires drilling to begin on a vertical ventilation hole within two years of the issuance of the permit or the permit expires. This makes the term of the vertical ventilation hole permit consistent with the term of a gas well permit.

4 VAC 25-101-50. Venting methane; bleeder system. (old 4 VAC 25-100-50.F) -- The new language prohibits vertical ventilation holes and coalbed methane gas wells from creating hazardous conditions underground and it requires mines to be adequately ventilated in accordance with bleeder plans.

4 VAC 25-101.60. Requirements for issuance of permit. (old 4 VAC 100-110) -- The new language removes the simultaneous permit application for vertical ventilation holes and coalbed methane gas wells process and it details the requirements for the Chief to issue a permit.

4 VAC 25-101.70. Filing of objections; scheduling of hearings. (old 4 VAC 25-100-150) -- The new language removes the simultaneous permit application process for vertical ventilation holes and coalbed methane gas wells.

4 VAC 25-101-80. Location of vertical ventilation holes. (similar to old 4 VAC 25-100-170) -- The new language changes “workable coal seam” to “minable coal seam or inactive mine”.

4 VAC 25-101-90. Record keeping. (old 4 VAC 25-100-180) -- The new language requires drillers log and plugging affidavits be kept by the Chief of the Division of Mines.

4 VAC 25-101-100. Review of action of chief. (old 4 VAC 25-190) -- No substantive change.

4 VAC 25-101-110. Casing requirements for vertical ventilation holes. (old 4 VAC 25-100-200) -- The new language conforms it to the Virginia Gas and Oil regulation. The cement wait time is reduced from 12 to 8 hours. The required cement strength is increased from 300 to 500 psi. Operators are required to perform a cement test and keep a record of the test and are required to keep records of the WOC (wait on cement time). These changes were made to be consistent with current industry standards.

Also, the regulation includes a minimum depth of 300 feet or 50 feet below groundwater for water protection strings and a minimum of 50 foot above and below coal seams for coal protection strings. Vertical ventilation holes drilled prior to December 11, 1985 must retain such coal protection strings as are in place and keep the space between casing strings open to the extent possible.

For voids, requirements include that casing to 30 feet below and 50 feet above voids are to be cemented. Unanticipated voids or groundwater horizons must be reported to the Chief of the Division of Mines and drilling reports must be submitted within 30 days of completion.

4 VAC 25-101-120. Survey requirements. (old 4 VAC 25-100-250) -- No substantive change.

4 VAC 25-101-130. Correction requirements. (old 4 VAC 25-100-250.B and C) -- No substantive change.

4 VAC 25-101-140. Filing of report. (old 4 VAC 25-100-250.D) -- The new language requires maps and logs including groundwater zones, coal seams, mineral beds and gas bearing formulations be included in the report.

4 VAC 25-101-150. Mining within 500 feet of a vertical ventilation hole or gas well. (old 4 VAC 25-100- 290) -- No substantive change.

4 VAC 25-101-160. Mining within 200 feet of a vertical ventilation hole, gas well or pipeline. (old 4 VAC 25-100-290.C) -- No substantive change.

4 VAC 25-101-170. Pillars of coal to be left unmined, and other protective measures. (old 4 VAC 25-100-290.E) -- No substantive change.

4 VAC 25-101-180. Mining within 200 feet of a plugged vertical ventilation hole or gas well. (old 4 VAC 100-290.G) -- The new language changes from 15 to 10 days the time a gas or oil well operator or mine operator has to object to the notice of intent to drill. This change was made to conform the requirement to the Code of Virginia.

4 VAC 25-101-190. Mining seams impacted by vertical ventilation holes and coalbed methane wells intended to degas the seams being mined. -- This is a new section provides that coal mine operators must include safe procedures for mining through a vertical ventilation hole or well in their approved bleeder plan.

4 VAC 25-100-200. Plugging of vertical ventilation holes. (old 4 VAC 25-100-370) -- The new language sets out the plugging specifications for open hole, cased hole and un-cemented casing. It requires plugging plans to be approved by the Chief of the Division of Mines and sets out a variance procedure for approval by the Chief. This section was changed to conform it to the Virginia Gas and Oil Regulation.

4 VAC 25-101-210. Identifying plugged holes; plugging affidavit. -- This is a new section based on the Gas and Oil regulations that details the requirements for permanent markers of abandoned vertical ventilation holes. It also provides for a variance procedure and requires that a plugging affidavit be submitted to the Chief of the Division of Mines.

4 VAC 25-101-220. Annual report; abandonment. (old 4 VAC 25-100-370) -- The new language requires that each July 1, vertical ventilation hole operators must submit a status report of all permitted holes to the Chief of the Division of Mines.

Family Impact Statement

Please provide an analysis of the regulatory action that assesses the impact on the institution of the family and family stability including the extent to which the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

The regulation should have a positive impact on Virginia families by protecting the public safety of families in close proximity to the location of vertical ventilation holes from damage to the drilling or operation of vertical ventilation holes. The regulation also protects the safety of underground miners which benefits the families of mines who in underground coal mines.